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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/609,399	07/03/2000	Kohji Kameda	R2184.0078/P078	4329

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EXAMINER

VU, TRISHA U

ART UNIT	PAPER NUMBER
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2189

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/609,399

Applicant(s)

KAMEDA, KOHJI

Examiner

Trisha U. Vu

Art Unit

2189

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The first phrase “performing an arbitration between the serial bus in accordance with IEEE1394 and the card buses when access demands are lodged from the serial bus in accordance with IEEE1394 and the card buses” and the second phrase “performing an arbitration between the card buses when an access right is to be given to one of the card buses” in claim 4 are not clear. It is not clear that in either situation (in the presence of access demands from the serial bus or the card buses), an arbitration is still performed between the arbitrating buses. Since there is only one serial bus on the secondary-side and the rest are card buses, it is inherent in the system that if the access demand is not lodged from the serial bus, then the arbitration is just between the card buses themselves. Therefore, the second phrase “performing an arbitration between the card buses when an access right is to be given to one of the card buses” is not necessary in the claim. Examiner interprets the second phrase the same meaning as the first phrase. Also, the arbitration method is still interpreted as giving an access right equally to each of the secondary-side buses since Applicant does not disclose a priority right is given to any buses in claim 4.

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Welker et al. (6,076,139) (hereinafter Welker).

As to claim 1, Welker discloses an arbitration method of a bus bridge (SYSTEM BRIDGE 106) which interfaces a primary-side bus (HOST BUS 104) being a local bus in a system and the secondary-side buses (FIREWIRE 108, USB 110, PCI 124,...) being external buses connected to the system (note Fig. 1), the bus bridge supporting a plurality of kinds of operations one of which is an operation related to a serial bus in accordance with IEEE1394 (note col. 2 lines 60-67, and col. 3 lines 1-25), the arbitration method comprising the step of giving an access right equally to each of the secondary-side buses (first in first out), when access demands to the primary-side bus are lodged from more than two of the secondary-side buses at the same time, by not giving a priority to any one of the secondary-side buses (note col. 4, lines 50-54).

As to claim 5, Welker further discloses changing an order of giving the access right (priority can be determined according to a least recently used, first-in-first-out, or round-robin fashion) (note col. 8 lines 16-19).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Welker et al. (6,076,139) (hereinafter Welker).

As to claim 2, Welker discloses all the limitations of claim 2 as applied to claim 1 above, including one of the secondary-side buses is the serial bus in accordance with IEEE1394. Welker also discloses the card buses (note col. 3, lines 22-25). However, Welker does not disclose that the rest of the secondary-side buses are card buses. It would have been an obvious matter of designer choice to employ different kinds of buses or same kind of buses in Welker's system since Welker's arbitration method works for different kinds of buses and it appears that the system would perform equally well with the rest of secondary-side buses being card buses.

As to claim 4, Welker further discloses the secondary-side buses include a plurality of card buses, and the arbitration method comprising the steps of: performing an arbitration between the serial bus in accordance with IEEE1394 and the card buses when

access demands are lodged from the serial bus in accordance with IEEE1394 and the card buses; and performing an arbitration between the card buses when an access right is to be given to one of the card buses (first in first out) (note col. 4, lines 50-54).

4. Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Welker et al. (6,076,139) (hereinafter Welker) as applied to claim 1 above, and further in view of Wei et al. (6,205,486) (herein after Wei).

As to claim 3, Welker discloses all the limitations of claim 3, except giving a priority right to the serial bus in accordance with IEEE1394; and maintaining the access right given to the serial bus in accordance with IEEE1394 when an access demand is lodged from the secondary-side buses other than the serial bus in accordance with IEEE1394. Wei discloses giving highest priority to a host and serving other hosts in sequential order (note col. 7 lines 37-41). It would have been obvious to one of ordinary skill in the art at the time the invention was made to give priority to the serial bus in accordance with IEEE1394; and maintain its access right when an access demand is lodged from the secondary-side buses to provide necessary service to high demand bus to complete the task expeditiously.

5. Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Welker et al. (6,076,139) (hereinafter Welker) as applied to claim 1 above, and further in view of Quackenbush et al. (6,163,824) (hereinafter Quackenbush).

As to claim 6, Welker discloses all the limitations of claim 6, except giving a highest priority to the primary side bus when the primary-side bus lodges an access demand to the secondary-side buses irrespective of a condition of arbitration between the secondary side buses. Quackenbush discloses assigning highest priority to the primary side bus (in processor side 16A) giving equal access to requests from other ports using round-robin (note col. 4. lines 42-52). It would have been obvious to one of ordinary skill in the art at the time the invention was made to give a highest priority to the primary side bus irrespective of a condition of arbitration between the secondary side buses as taught by Quackenbush in the system of Welker help minimize the access latency of the processor on the local bus (note col. 4. lines 54-56).

6. Claims 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Welker et al. (6,076,139) (hereinafter Welker) in view of Quackenbush et al. (6,163,824) (hereinafter Quackenbush).

As to claim 7, Welker discloses an arbitration method of bus bridge (SYSTEM BRIDGE 106) which interfaces a primary-side bus (HOST BUS 104) with a plurality of secondary-side buses (FIREWIRE 108, USB 110, PCI 124,...), the primary side bus being a local bus in a system and the secondary-side buses being external buses connected to the system (note Fig. 1), the bus bridge supporting a plurality of kinds of operations one of which is an operation related to a serial bus in accordance with IEEE1394 (note col. 2 lines 60-67, and col. 3 lines 1-25), the arbitration method comprising first in first out (note col. 4, lines 50-54). However, Welker does not

discloses the arbitration comprising the step of giving a highest priority to the primary-side bus when the primary side bus lodges an access demand to the secondary-side buses irrespective of a condition of an arbitration between the secondary-side buses.

Quackenbush discloses assigning highest priority to the primary side bus (in processor side 16A) giving equal access to requests from other ports using round-robin (note col. 4. lines 42-52). It would have been obvious to one of ordinary skill in the art at the time the invention was made to give a highest priority to the primary side bus irrespective of a condition of arbitration between the secondary side buses as taught by Quackenbush in the system of Welker help minimize the access latency of the processor on the local bus (note col. 4. lines 54-56).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trisha U. Vu whose telephone number is 703-305-5959. The examiner can normally be reached on Mon-Thur and alternate Fri from 7:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 703-305-4815. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

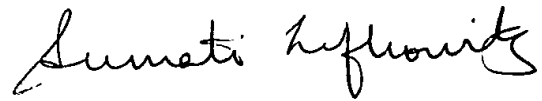
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Trisha U. Vu
Examiner
Art Unit 2189

uv
November 26, 2002



SUMATI LEKOWITZ
PRIMARY EXAMINER